

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group
Art Unit: 1771

Attorney
Docket No.: SHC0029-02

Applicant: Toshio KABAYASHI et al.

Invention: Nonwoven Fabric and Method for Making
the Same

Serial No: 09/220,223

Filed: December 23, 1998

Examiner: Elizabeth M. Cole

RESPONSE AFTER FINAL
EXPEDITED PROCESSING REQUESTED

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on January 17, 2003

Michael S. Gzybowski
Michael S. Gzybowski

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The Official Action of October 8, 2002 has been thoroughly studied. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

Claims 1-3 and 6-12 are pending in this application.

Claims 1-3 and 6-12 stand rejected under 35 U.S.C. § 112, first paragraph as claiming subject matter that was not described in the specification in such a way so to reasonably convey to one skilled in the relevant art that the inventor(s), at the time that the application was filed, had possession of the claimed invention.

Specifically the Examiner states that the specification as originally filed does not state that "said thermoplastic synthetic fibers being non-fused throughout said fabric."

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The Examiner cites *Ex parte Grasselli*, 231 USPQ 393 (Bd. App 1983), *aff'd mem.*, 738 F.2b 453 (Fed. Cir, 1984) as holding that the mere absence of a positive recitation is not basis for an exclusion.

The Examiner states that "[a]ny claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement."

In *Ex Parte Grasselli* the Board of Appeals pointed out that:

The examiner has not explained the basis of the rejection for lack of enablement and we find none independently. (231 USPQ 393, at 394)

The Board of Appeals did however state that:

We shall affirm the rejection based on lack of description in the specification as filed. (231 USPQ 393, at 394)

Ex parte Grasselli is inconclusive because there are not enough facts reported therein to determine if the holding therein is applicable to the present situation or any particular situation.

The first paragraph of 35 U.S.C. §112 states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

In *Ex parte Grasselli*, the Board of Appeals cites *In re Anderson*, 176 USPQ 331 (CCPA 1973).

In *Anderson* the CCPA indicated that "Appellant is clearly entitled to have the whole of his disclosure considered" when determining if the claims are supported by the specification.

In the present situation it is submitted that applicants' disclosure fully supports the claimed recitation that the thermoplastic synthetic fibers are "non-fused throughout said fabric." Moreover, applicants' disclosure provides enablement for one skilled in the art to "make and use" a fabric comprising thermoplastic synthetic fibers that are "non-fused throughout said fabric."

Beginning on page 1, lines 1-4 of applicants' specification, applicants introduce their invention as relating to "nonwoven fabrics well adapting itself to embossing."

With this introduction, applicants next describe the prior art as "not necessarily [being] easy to form irregularities thereon by embossing. ...because the synthetic fiber has relatively high rigidity and elasticity." (page 1, lines 10-13). It is readily understood that the "embossing" referred to at this portion of the disclosure does not involve heating, melting and fusing the fibers, because in such a case the irregularities would readily be formed and maintain their shapes if the fibers were merely heated, melted and fused. Thus, one skilled in the art would recognize that this portion of the specification which forms the basis of introducing applicants' claimed invention refers to embossing techniques that do not fuse the fibers together.

In the paragraph bridging pages 2 and 3 it is noted that in attempts to emboss a fibrous web to form apertures of 5 mm or less, "the individual fibers can not be smoothly rearranged around each of the projection provided on the embossing machine." (see page 2, lines 2-4). From this passage it becomes even more clear to those skilled in the art that applicants' disclosure relates to embossing techniques that "rearrange" fibers about "projections provided on an embossing machine" rather than embossing processes that heat, melt and fuse the fibers.

Further at page 2, lines 11-14 and 15-21 it is stated that applicants' invention provides a nonwoven fabric having "a sufficiently high formability to facilitate formation of embosses/debosses

of apertures.” The statement of the invention has to be read in the context of the above reference to the fibers being rearranged (as opposed to being heated, melted and fused) during the embossing process.

On page 5, line 19 through page 6, line 1 applicants disclose how their fibers are “slightly oriented” and “randomly distributed” around portions of the protuberances. This disclosure is commensurate with the prior reference to an embossing technique in which the fibers are rearranged around the projections of an embossing machine.

Note, at page 5, lines 9-10, applicants state that no binding agents are used, which could tend to inhibit the movement (rearrangement or orientation) of the fibers during embossing.

Applicants’ process of making the nonwoven fabric is set forth on pages 3-4 as including the steps of:

- a. obtaining a wet sheet from slurry of a fibrous mixture comprising thermoplastic synthetic fibers and pulp fibers; and
- b. placing the wet sheet on a support and then subjecting the wet sheet to high velocity water jet streams for mechanically entangling the fibrous mixture.

The disclosed process would necessarily result in a fabric comprising thermoplastic synthetic fibers that are “non-fused throughout said fabric.”

Following the formation of the nonwoven fabric, the fabric is subjected to an embossing process that orients and distributes the fibers (as opposed to heating, melting and fusing the fibers).

As the Examiner is no doubt aware, embossing techniques can be used which rearrange and redistribute the fibers of a nonwoven fabric. Such techniques result in fibers that are non-fused.

In fact, in the present situation, applicants specifically disclose their invention, in part, as having a particular combination of fibers and fiber characteristics which allow the formation of surface irregularities by rearranging or reorienting and distributing the fibers during an embossing process.

It is submitted that a careful, overall review of applicants' specification makes it clear to those skilled in the art, that applicants' technique of forming protuberances in the nonwoven fabric does not result in the fibers being fused, i.e., the fibers are non-fused.

The disclosure requirements of 35 U.S.C. §112, first paragraph requires an applicant to provide a written description of what he or she considers to be his or her invention. There is no requirement that an applicant include a description of what is not his or her invention. Accordingly, in the present situation, applicants are not required to explicitly state that their fibers are not fused.

As held in *In re Anderson (supra)*:

In determining whether an amendment to a claim constituted new matter, the question is not whether the added word was a word used in the specification as filed, but whether there is support in the specification for employment of the word in the claim, i.e., whether the concept is present in the specification.

In the present situation, for the reasons set forth above, it is submitted that applicants' specification fully supports the recitation that the fibers are non-fused.

Accordingly, the Examiner is requested to reconsider and withdraw the outstanding rejection of the claims under 35 U.S.C. §112, first paragraph.

As noted above, in the Official Action the Examiner states that "[a]ny claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement.

For the reasons set forth above, it is respectfully submitted that the original disclosure does in fact "have basis" to support that the fibers are non-fused, when properly considering the specification in accordance with *In re Anderson (supra)*.

Claims 1-3 and 6-12 stand rejected under 35 U.S.C. §103(a) as being anticipated by United States Patent No. 4,100,324 to Anderson et al. in view of U.S. Patent No. 4,879,170 to Radwanski et al.

For the reasons set forth below, it is submitted that all the pending claims are allowable over the prior art of record and therefore, each of the outstanding prior art rejections of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

The Examiner has relied upon Anderson et al. as disclosing a nonwoven fabric comprising meltblown microfibers and a pulp material.

The Examiner concedes that:

Anderson differs from the claimed invention because Anderson forms the embossed areas via heat bonding which may reduce the absorbency of the fabric at least at the embossed areas.

The Examiner has relied upon Radwanski et al. as teaching that nonwoven fabrics may be hydroentangled on a mesh screen, forming wire or apertured plate in order to form embossments or protuberances with out changing the properties such as absorbency.

In combining the teachings of Anderson et al. and Radwanski et al. the Examiner takes the position that:

...it would have been obvious...to have formed the embossed pattern by hydroentangling the fabric.

The Examiner states that:

One of ordinary skill in the art would have been motivated to employ hydroentangling and a forming fabric rather than a heat embossing process in order to maintain the absorbency of the fabric even in the patterned areas.

As pointed out in applicants' Amendment filed August 1, 2002, Radwanski et al. makes no mention of "embossments" or "protuberances" as the Examiner states. Moreover, Radwanski et al. does not appear to make any statement regarding any effect of a support such as a screen has on absorbency or any other property of the resulting coform material.

In response to applicants' previous arguments, on page 3 of the Official Action the Examiner has stated that "at col. 14, lines 4-41, Radwanski teaches that smooth or pattern surfaces can be formed depending on the type of support which is used.

Anderson et al. is very specific about the embossing and teaches that:

...if it is desired to improve the strength of the composite web 34, it may be embossed either ultrasonically or at an elevated temperature so that the thermoplastic microfibers are flattened into a film-like structure in the embossed areas. (column 6, lines 48-51).

Anderson et al. further teach that:

...the embossing pattern may be appropriately selected to provide the desired characteristics in the final product. (column 6, lines 59-61).

At column 7, lines 1-12, Anderson et al. discussed how "substantial improvements in strength" can be made by using a specific ultrasonic embossing machine.

It is very clear that Anderson et al. relies upon embossing to strengthen the nonwoven fabric and that Anderson et al. relies upon an embossing technique that utilizes heat bonding (and fusing) as the Examiner has conceded.

The Examiner has relied upon Radwanski et al. as teaching that smooth or pattern surfaces can be formed depending on the type of support which is used.

It is submitted that such smooth or patterned surfaces, absent heat bonding, do not impart the strength characteristics that are expressly required by Anderson et al.

Therefore, the Examiner's reliance upon the teachings of Anderson et al, and Radwanski et al. and the specific combination of these teachings is not supported by the Anderson et al. Moreover, it is believed that, absent the heat bonding of Anderson et al., the Examiner's proposed combination, which eliminates heat bonding, would destroy the teachings of Anderson et al. Otherwise, there is clearly no motivation or benefit to the combination.

It is pointed out the even Radwanski et al. teach that "other optional secondary bonding treatments" that "provide added strength" include "thermal bonding, ultrasonic bonding, adhesive bonding, etc." However, these techniques decrease softness. (column 14, lines 55-60)

It is thus submitted that if one were to follow the teachings of Anderson et al. to strengthen the composite web (departing from the express teachings would nullify any obviousness), that person would either use the heat bonding taught by Anderson et al. or the heat bonding taught by Radwanski et al.

That is what the references teach.

To otherwise depart from the clear teachings of the references indicates that some other teaching has to be relied upon, and in such a case applicants' own teaching cannot be used for this purpose. To do so would amount to improper hindsight.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is

respectfully submitted that the Examiner cannot rely upon the prior art under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejections of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejections of the claims and an early allowance of the claims is believed to be in order.

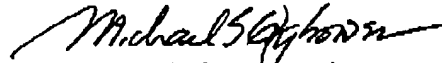
It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remains outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of

time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



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